

DESCRIPTION OF THE COPPINIA OF AN AUSTRALIAN HYDROID

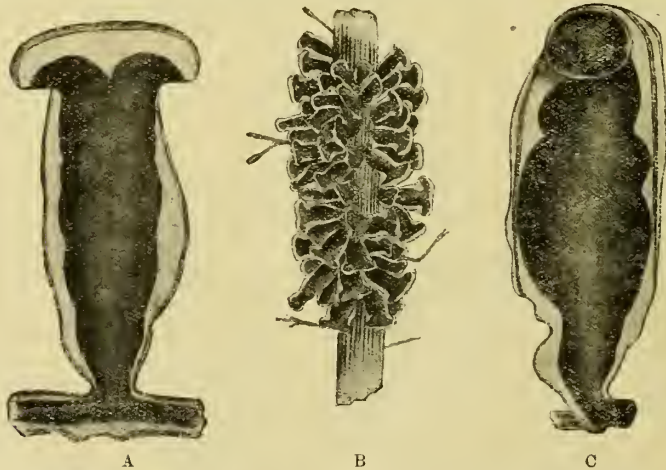
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(With a Figure in the text.)

In the report on the "Hydrozoa (Hydroid Zoophytes and Stylasterina)" obtained by the "Thetis" Expedition during trawling operations within the one hundred fathom line off the coast of New South Wales, Dr. Ritchie (7) described, under the name of *Lictorella concinna*, a small number of colonies from Station 44, off Coogee, five to six miles from shore; depth, 49 to 50 fathoms. He had only sterile specimens for examination, but several fine colonies of this species, on one of which I found a coppinia mass, occur among some hydroids which were recently dredged off Botany Bay, N.S. Wales, at a depth of 50 fathoms. These specimens are somewhat larger than those originally described and reach a height of 30 mm.

The coppinia, which, as far as I am aware, has not hitherto been observed, consists of a mass of loosely aggregated gonangia, and probably indicates a transition between those forms in which the gonangia are firmly bound to each other and those with separated gonangia.



Text-fig. 1.—*Lictorella concinna*. A. Gonangium seen in frontal aspect.
B. Coppinia on main stem. C. Gonangium seen in lateral aspect.

GONOSOME OF LICTORELLA CONCINNA.—The gonangia are attached in a dense cluster to the main stem forming a coppinia mass which surrounds it on all sides. The great majority of the gonangia stand out at right angles from the stem; a few, however, are more or less closely appressed to its surface. This mass of aggregated gonangia occupies a length of 3.5 mm., on the main stem and comprises some ninety individual gonothecae. The gonangia are ovate with undulated edges, truncated at the distal end, and tapering towards the proximal extremity. They usually pass into the very short peduncle gradually and without any distinct constriction or interruption. In frontal aspect each gonangium is a little narrowed in near the distal end and then widens outwards forming a conspicuous round projection or shoulder at each side of the top where the gonangium reaches its maximum width. These shoulders are produced slightly downwards into truncated processes, each of which ends in a small circular aperture directly facing towards the proximal extremity of the gonangium. The summit of the gonangium is usually convex, although in a few examples it may be slightly concave between the rounded shoulders. The gonangia attain a length of 0.77 mm., with a maximum width, in frontal aspect, of 0.33 mm., at the distal extremity. When viewed laterally the profile is obovate, and the gonangium reaches a maximum width of 0.28 mm., about two-thirds of the length of the body from the proximal end.

Ritchie has already drawn attention to the striking resemblance between the trophosome of *Lictorella concinna* and that of *Lictorella cervicornis*, Nutting (= *Zygophylax cervicornis*) from the Hawaiian Islands (6). Nutting's species, however, differs from *L. concinna* in that there is a nematophore at the base of each pedicle. There was no trace of these structures in the "Thetis" specimens, nor do they occur in the more abundant material which I now have at my disposal from a few miles south of the type locality. Although Ritchie considered the absence of nematophores in *L. concinna* significant, he was uncertain whether their presence or absence fell within the range of everyday variation, but the totally distinct gonosomes possessed by *Zygophylax cervicornis* and *Lictorella concinna* establish at once the validity of his species.

According to Nutting's description the gonosome of *Zygophylax cervicornis* has the following structure:—

"*GONOSOME*.—Gonangia forming a "Coppinia" mass on the main stem, roughly triangular in outline, the distal ends being the broader on account of the opposite shoulders, which are quite conspicuous and end in round apertures. Midway between these shoulders there is a short neck ending in a third aperture. The individual gonangia are borne on short branchlets, which continue beyond them, arching over each gonangium so as to form a protecting network of such branches over the aggregated gonangia."

Although *L. concinna* closely approaches *Lafoea convallaria*, Allman (1), the differences in the characters of the trophosomes are well-marked and the gonangia are quite distinct. Clarke (5) describes the gonangia of *L. convallaria* as "sessile and anchor-shaped, with the orifices, of which there are two in each gonangium, at the extremities of the obtusely pointed flukes."

II.—NOTES ON NOMENCLATURE.

During the course of preparation of a catalogue of the Hydroid Zoophytes of the coast of New South Wales certain changes in the nomenclature have been found unavoidable and it has been necessary to propose new names for three species. The reasons for such changes will be found under the species affected.

Family EUDENDRIDAE.

Genus EUDENDRIUM *Ehrenberg*.EUDENDRIUM LENDENFELDI *nom. nov.*

Eudendrium pusillum Lendenfeld, Proc. Linn. Soc. N.S.W., IX., 1885, p. 352 (name preoccupied; not *E. pusillum* Sars). Not *Eudendrium pusillum* Thornely, Ceylon Pearl Oyster Fisheries, pt. 11, Suppl. Rep. VIII.—Hydroida, 1904, p. 110, pl. 1, fig. 5.

As the name *Eudendrium pusillum* was used by Sars in 1857, I, therefore, substitute *Eudendrium lendenfeldi* for this species which was originally described by Lendenfeld from Port Jackson.

A comparison of Lendenfeld's type slide with Miss Thornely's description and figure of *E. pusillum* from Cheval Paar in the Gulf of Manaar convinces me that she has described a totally distinct species.

Family SERTULARIDAE.

Genus SERTULARIA *Linnaeus*.SERTULARIA BALEI *nom. nov.*

Sertularia loculosa Bale, Cat. Austr. Hydroid Zooph., 1884, p. 91 (part), pl. IV., fig. 5, 6, pl. XIX., fig. 9. *Id.*, Warren, Ann. Natal Govt. Mus., 1, 3, 1908, p. 306, pl. XLVIII., fig. 37, text-fig. 8. *Id.*, Bale, Proc. Roy. Soc. Vict., XXVI., 1913, p. 121, pl. XII., fig. 7, 8.

Sertularia turbinata Billard, Ann. Sci. Nat. Zool., (9), XI., 1910, p. 19 (in part).

? *Sertularia turbinata* Ritchie, Proc. Zool. Soc., 1910, p. 821.

Not *Sertularia loculosa* Busk.

Not *Dynamena turbinata* Lamouroux.

This species has been confused with *Sertularia loculosa* Busk, which Billard (4) has shown to be identical with *Dynamena turbinata* Lamouroux.

Bale (2) originally associated several forms under the name of *Sertularia loculosa*, some of which differ considerably from the typical form. He has since shown (3) that they represent more than one species, but while accepting the original name *Sertularia turbinata* (Lamouroux) for Busk's species, he has retained the name *Sertularia loculosa*, in a restricted sense, for this common short-celled form. This procedure being contrary to the rules of zoological nomenclature, I propose the name *Sertularia balei* for this species.

SERTULARIA TRYPHERA *nom. nov.*

Sertularia geniculata Bale, Proc. Linn. Soc. N.S. Wales, (2), III., 1888, p. 768, pl. XVII., fig. 6-11. (name preoccupied; not *Sertularia geniculata* Linnaeus).

As the name *Sertularia geniculata* was used by Linnaeus, I, therefore, substitute *Sertularia tryphera* for this species which was originally described by Bale from specimens in the Australian Museum collection from Port Jackson.

REFERENCES.

1. ALLMAN—Mem. Mus. Comp. Zool., V., 2, 1877, pp. 1-66, pls. I-XXXIV.
2. BALE—Cat. Austr. Hydroid Zoophytes, 1884, p. 91.
3. BALE—Proc. Roy. Soc. Vict., (n.s.), XXVI., 1, 1913, p. 122.
4. BILLARD—Ann. Sci. Nat., Zool., (9), IX., 1909, p. 322.
5. CLARKE—Bull. Mus. Comp. Zool., V., 1878-1879, pp. 239-252, pls. I-V.
6. NUTTING—Bull. U.S. Fish. Commission, XXIII., 3, 1903 (1906), pp. 933-959, pls. I-XIII.
7. RITCHIE—Mem. Austr. Mus., IV., 1911, pp. 807-869, pls. LXXXIV-LXXXIX., and fig. 126.